

## REVIEWS

**Britton and Brown's Illustrated Flora: Second Edition\***

The appearance of the second edition of the "Illustrated Flora" marks a new epoch in the study of the plants of eastern North America. That there has been a persistent demand for the older edition, long since exhausted, well illustrates the position that its successor will undoubtedly occupy. The conception of a work of this scope, with illustrations of every one of our flowering plants and ferns and fern allies, appeals to the imagination. The very size of the undertaking and its final accomplishment, there are 4,666 species described and figured in the second edition, impresses one with the untiring fidelity of the authors to that original idea which culminated in the first "Illustrated Flora."

The present work is no mere retouching of the old plates, no *laissez-faire* revision of an old work as complete in its day as possible. It is a fundamental and thorough revision, shot through with all the principles and precepts that have been fostered and nurtured at the New York Botanical Garden. Besides the changes made necessary by adherence to these principles, the book is further enhanced by the addition of 504 species not previously described or figured by these authors in their first edition.

During 1908, Dr. Britton issued his paper on the taxonomic aspect of the species question,† in which he announced his view of the status of varieties and species, relegating the former to other than botanical usage, and suggesting for these forms "assumed to be of lower rank than species" the term races. "For general taxonomic purposes, these need not be designated; the conception and description of the species is broad enough to include all races of which it is composed." In the present edition of the flora, this proposition has been adhered to and all the many varietal names, usually trinomials, of the first edition

\* Britton, N. L., and Brown, Addison. An illustrated flora of the northern United States and the British possessions. In 3 volumes. Vol. 1, pp. v-xxix + 1-680, fig. 1-1658; Vol. 2, pp. 1-735, fig. 1659-3329; Vol. 3, pp. 1-637, fig. 3330-4666. Chas. Scribner's Sons, New York. Price \$13.50. (Issued 7 June, 1913.)

† Am. Nat. 42: 225-242. 1908.

are lacking. Instead, notes such as the following are frequently inserted at the end of the description of the typical form: "Here regarded as consisting of numerous slightly differing races, perhaps including the five following described as species."\* In this fashion, or by the raising of old varieties to specific rank, hundreds of varietal names that appeared in the first edition, are, for taxonomic purposes, obliterated. The authors have felt that these forms or races are worthy of notice, hardly of nomenclatorial recognition. This feature undoubtedly simplifies the problem, but to the old-line describer of plants, the stickler for varietal characterization, it will seem almost like an evasion. That the method here followed is an eminently sane and practicable one, seems almost axiomatic when we remember that, in a flora as rich and variable as our own, there is simply no limit to the ingenious fecundity of acute observers in describing and naming so-called varietal forms. Such things have happened in the past, notably in the genera,—but charity forbids the disclosure of the groups that have been fair game for these sharp practitioners. It is unquestionably with something like real relief that the average user of the present work will greet the altogether practical, and pragmatic, method of disposing of this problem.

The wholly modern tendency to subdivide existing genera and families into smaller and smaller categories is a movement to which the authors have lent the weight of their great authority throughout the present work. They have split up many large, often unwieldy groups, into smaller, and presumably more manageable units. There are good arguments for the old method of making large genera and families with a liberal use of sub-generic and subfamily headings; there are equally good, or better, arguments for making smaller and tighter categories. Most of us, suckled on the old manuals, have clung tenaciously to old ideas, but the attempt to keep always an open mind to the many advantages of the newer method has forced us into more or less of a dilemma. The new edition will undoubtedly settle this perplexing question for some of us who

\* See *Aster macrophyllus*, Vol. 3, p. 411.

could never quite decide on which horn of the dilemma we cared to be impaled. That some of these changes have been drastic will be seen from the following list of family names, culled at random, that appear for the first time in the *Illustrated Flora*: Aesculaceae, Alsinaceae, Cacompaceae, Cannabinaceae, Corrigiolaceae, Lobeliaceae, Trilliaceae and Zannichelliaceae. There are doubtless others and in the index both the old and new family names have been indexed, so that those unfamiliar with these new designations need not be confused.

The same policy has been followed in the subdivision of existing genera, but these changes are too numerous to mention here. Wherever, for the sake of accuracy of characterization or unification of more or less constituent subgeneric groups, the authors have seen an opportunity to divide such groups, they have done so.

This is not the time, or is a review the place for any lengthy discussion of that spectre of modern taxonomy, nomenclature. Of course, the present authors have steadfastly followed the code of which Dr. Britton has for many years been the chief exponent. Fourteen years of adherence to this system, aided by a constantly increasing library and collection and the constant "nailing" of old types, must result in many changes. These are unfamiliar to most of us who have not the opportunity or the highly specialized training necessary for work of this sort. Such changes, and there are many in the present work, will be greeted with enthusiasm by those who appreciate the ideal that has generated them, and with something like consternation by that large class of stand-patters who prefer conservatism to a policy that "may seem to some to be too radical."\*

For the reasons outlined above,—the tendency to split into smaller generic and family units, the strict adherence to the principles of nomenclature now too well known to need further discussion, the fixing of generic and specific types, and above all, the access to a splendid library,—all these have necessitated many changes in names. In the following list the reviewer has attempted to give changes in generic names, that differ in the

\* See Introduction, Vol. I, p. vi.

two editions. The first name is that of the first edition followed by the name or names applied to the same category in the second edition. The list may not be quite complete but it is printed with the hope that it may aid those who have not the opportunity to work out all these changes for themselves.\*

Abromia (in part) = Tripterocalyx	Cymopterus (in part) = Phellopterus
Achroanthus = Malaxis	Cypripedium (in part) = Fissipes
Actinospermum = Endorima	Cystopteris = Filix
Adicea = Pilea	Dicksonia = Dennstaedia
Adelia = Forestiera	Dracocephalum (in part) = Moldavica
Adopogon = Krigia, Cynthia and Cymbia	Dryopteris (in part) = Polystichum
Aira = Aspris	Dupatya = Syngonanthus
Alchemilla (in part) = Aphanes	Dysodia = Boebera
Alisma (in part) = Helianthium	Eatonia = Sphenopholis
Ammodenia = Honkenya	Echinocactus = Pediocactus
Ampelanus = Gonolobus	Eclipta = Verbesina
Andropogon (in part) = Schizachyrium and Amphipholis	Elymus (in part) = Sitanion
Apios = Glycine	Elyna (in part) = Kobresia
Apium = Celeri	Eragrostis (in part) = Acamptocladus
Arctostaphylos = Uva-Ursi	Erianthus (in part) = Coelorachis
Asplenium acrostichoides = Athyrium	Eriocarpum = Sideranthus
Astragalus (in part) = Geoprumnon	Erysimum (in part) = Cheirinia
Bahia = Picradeniopsis	Erythraea = Centaurium
Berberis (in part) = Odostemon	Euphorbia = Chamaesyce, Zygophyllidium, Dicrophyllum, Tithymalopsis, Tithymalus and Poinsettia
Bidens (in part) = Megalodonta	Gentiana = Dasystephana
Bignonia = Anisostichus	Geranium (in part) = Robertiella
Bouteloua (in part) = Atheropogon	Gerardia = Agalinis and Otophylla
Brassica (in part) = Eruca	Geum (in part) = Sieversia
Brauneria = Echniacea	Gratiola (in part) = Sophronanthe
Breweria = Stylisma	Gyrostachys = Ibidium
Bronssonetia = Papyrius	Habenaria = Perularia, Coeloglossum, Gymnadeniopsis, Limnorchis, Lysias, Lysiella and Blephariglottis
Butneria = Calycanthus	Helianthemum = Crocanthemum
Cactus = Coryphantha	Holcus = Notholcus
Calophanes = Dyschoriste	Illicoides = Nemopanthus
Calypso = Cytherea	Ixophorus = Chaetochloa
Carduus (in part) = Cirsium	Jatropha = Cnidoscopus
Carex Fraseri = Cymophyllus	Kalmia (in part) = Kalmiella
Cassia (in part) = Chamaecrista	Kuhnistera = Petalostemum
Cassiope (in part) = Harrimanella	Legouzia = Specularia
Cebathia = Epibaterium	Leontodon = Aparentia
Chrysopogon = Sorghastrum	Leptorchis = Liparis
Cladium = Mariscus	Leucothoë (in part) = Eubotrys
Claytonia (in part) = Crumocallis and Limnia	Limnanthemum = Nymphoides
Clematis (in part) = Viorna	Linum (in part) = Cathartolinum
Cornus (in part) = Cynoxylon and Chamaepericlymenum	Listera = Ophrys
Coronopus = Carara	Lotus (in part) = Hosackia
Cucurbita = Pepo	Malapoenna = Glabraria

\* Some of these changes were made in Dr. Britton's Manual, some in his tree book, some in the North American Flora, some by various and sundry authors in the past, and many are here proposed for the first time. All are wholly new to the Illustrated Flora.

Mentzelia (in part) = Nuttallia	Sanguisorba (in part) = Poteridium and Poterium
Mohrodendron = Halesia	Saxifraga (in part) = Antiphylla, Lep- tasea, Micranthes, Muscaria, Chon- drosea and Hydatica
Monniera = Bramia, Hydrotrida and Mecardonia	Scabiosa (in part) = Succisa
Onagra = Oenothera	Scolopendrium = Phyllitis
Onoclea = Matteucia	Sedum (in part) = Rhodiola
Orchis (in part) = Galeorhiza	Sisymbrium (in part) = Norta
Oxalis (in part) = Ionoxalis and Xan- thoxalis	Sorghum = Holcus
Oxygraphis = Halerpestes	Sphaeralcea = Phymosia
Panicum (in part) = Echinochloa	Spiesia = Oxytropis
Pedicularis (in part) = Elephantella	Stenophragma = Arabidopsis
Phegopteris = Dryopteris	Taraxacum = Leontodon
Picradenia = Tetraneuris and Hymen- oxis	Tecoma = Bignonia
Pieris (in part) = Neopieris	Tetragonanthus = Halenia
Pogonia (in part) = Isotria and Tri- phora	Tillaea = Tillaeastrum
Polygonum (in part) = Tovaria, Per- siciaria, Bistorta, Tracaulon, Tiniaria and Pleuropteris	Tillandsia = Dendropogon
Polypteris = Othake	Tofieldia (in part) = Triantha
Polytaenia = Pleiotaenia	Tradescantia (in part) = Cuthbertia
Potentilla (in part) = Sibbaldiopsis	Tunica = Petrorhagia
Prunus (in part) = Padus	Ulmaria = Filipendula
Pteris = Pteridium	Utricularia (in part) = Vesiculina, Lec- ticula, Setiscapella and Stomoisia
Rhus (in part) = Schmaltzia and Toxi- codendron	Vaccinium (in part) = Vitis-Idaea
Ribes (in part) = Grossularia	Verbesina = Ridan, Phaethusa and Ximensia
Roripa = Radicula, Armoracia and Neobeckia	Willughbaeya = Mikania
Rudbeckia (in part) = Dracopsis	Woodwardia = Anchistea and Lorinseria
Rynchosia = Dolicholus	Wulfenia = Synthyris
	Zephyranthes = Atamosco
	Zygadenus (in part) = Anticlea, Toxi- coscordion and Oceanorus

Perhaps some of us will grieve just a little wistfully at the passing of old friends like *Polygonum*, *Gentiana*, *Gerardia*, *Tecoma*, *Taraxacum*, *Apium*, *Apios* and many others. The death of more recent acquaintances, for whom many never cherished any really passionate longing, like *Adopogon*, *Adicea*, *Brauneria*, *Limnanthemum*, *Onagra* and a host of others, will be mourned more calmly.

Those with carefully written up collections and herbaria will be among the number to greet the hundreds of changes necessary in *specific* names contingent upon the above list, with mingled feelings. But nothing comes of stagnation, much by devoted effort, nothing of intellectual indolence, much by activity, and let the disgruntled keepers of herbaria and the like, say with Kipling, cheerfully, even gratefully,

“Many ways Thou has fashioned: All of them lead to the Light.”

If Light in this connection postulates stability of nomenclature,

most of us would welcome twice the changes proposed in the present work. For we have all, these many years, been clutching rather wildly, sometimes almost deliriously, at what we hoped was Light.

Lack of space forbids a discussion of the many interesting points that have arisen in a study of these three volumes. The placing of *Uvularia* in Convallariaceae, and the failure to take up *Oakesia* for *Uvularia sessilifolia*, are significant features. Again, the splitting up of the old pink family into Corrigiolaceae, Alsinaceae and Caryophyllaceae, and the position of the first of these before Nyctaginaceae are quite in line with modern ideas as to the affinities of these groups. Dr. Britton has not maintained the genus *Negundo*, which has had some adherents in this country and on the continent. Indeed the failure to maintain this genus and a few more doubtful propositions of the same sort, together with the quelching of trinomials, are practically the only reactionary tendencies in a work, otherwise almost wholly modern.

Mention should be made of the thousands of English and vernacular names, all carefully indexed, many of them an integral part of the outdoor vocabulary of different sections of the country. This most useful feature of the volumes is mostly the work of the late Judge Brown, whose death, pathetically enough, occurred six weeks before the book was finally published, and only a few days before bound copies of the book were ready.

The illustrations, binding (red) and press work are of a high order, coming up in every way to the excellent standard set by the first edition. The scheme of printing the index on specially heavy paper is an excellent protection for a much used section of the book. I have noticed only one error in the index, where Hippocastanaceae is referred to 1: 498 instead of to volume two, the same page.

In conclusion it may be said that the work is a sincere and devoted attempt to bring our knowledge of the flora in eastern North America up to date. It is an unusually successful effort to combine all that the authors have stood for in the advancement of systematic botany in this country. Only the heartiest

congratulations are to be extended to Dr. Britton, to whom the chief labor has fallen, upon the accomplishment of a task fitting in every way to be a permanent record of his life-long study of our flora.

NORMAN TAYLOR

## PROCEEDINGS OF THE CLUB

APRIL 30, 1913

The meeting of April 30, 1913, was held in the laboratory of the New York Botanical Garden at 3:30 P.M. Vice-president Barnhart occupied the chair. Eighteen persons were present.

The minutes of March 26 and April 8 were read and approved.

The Committee on Exchanges, consisting of Dr. W. D. Johnston and Dr. J. H. Barnhart, submitted their annual report, which was adopted. The report showed that the following exchanges had been arranged for 1912-1913:

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The resignations of Mrs. A. D. Russell and Mrs. Wm. Mitchell were read and accepted.

Dr. Barnhart announced the death of Hon. Addison Brown who was at one time President of the Club. On the motion of Dr. Britton a committee consisting of Prof. E. S. Burgess, Dr. H. H. Rusby, and Dr. J. K. Small was appointed with power to prepare a suitable memorial of Judge Brown.

The first number on the announced scientific program consisted of a paper on "Local Flora Notes" by Mr. Norman Taylor. Mr. Taylor gave a short account of his studies on the relationship of the flora of Long Island, Staten Island, and the New Jersey pine-barrens. Lists of species were given that are found only on Long Island and the New Jersey Coastal plain but not on Staten Island, and also lists of plants found on Staten Island but not on Long Island. Mention was also made by the speaker of the discovery by Miss Mulford at Arkville of the musk-root.